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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/812,770	DAHLBY ET AL.	
	Examiner	Art Unit	
	Justin M. Philpott	2616	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 44 is objected to because of the following informalities: it appears that “sending data to the first radio” (claim 44, line 10) should be changed to either “sending data from the first radio”, “sending data to the second radio”, or “receiving data from the first radio” in order to maintain consistency with applicant’s described invention. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 30-32, 35, 41-45, 50-53, 56 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,239,545 to Buchholz.

Regarding claim 30, 41, 43, 44, 50-53, Buchholz teaches a method for opening a communications stream comprising: registering a first radio (e.g., one of UM 101-103, see FIG. 1) with a second radio (e.g., CM 105) by sending identification information to the second radio (e.g., see col. 4, lines 29-41 regarding sending “information such as the address of the source UM”); sending/receiving a request message to/at the second radio (e.g., CM 105) from the first radio (e.g., one of UM 101-103) based on the registration to open a communications stream (e.g., see col. 4, lines 29-41 regarding “UMs 101-103 transmit a request to the CM 105”);

receiving/sending a channel assignment message (e.g., channel grant) from the second radio (e.g., CM 105) to the first radio (e.g., one of UM 101-103) in a first time frame in response to the request message (e.g., see col. 4, line 37 – col. 5, line 57 regarding requests for small and large data amounts, and with respect to large data amounts see particularly col. 5, lines 34-44 regarding “send a large channel grant in the grant timeslot 410 of RF TDM frame #4”), the channel assignment message including an identification of an assigned communications channel (e.g., large data channel) for the communications stream, the assigned channel (e.g., large data channel) being in a slot (e.g., large data channel timeslot 420) of a repeating time frame (e.g., see FIG. 4 regarding each repeating frame); and sending/receiving data to/at the second radio (e.g., CM 105) from the first radio (e.g., one of UM 101-103) in response to the channel assignment message in the assigned slot in a second time frame (e.g., frame #5), the second time frame (e.g., frame #5) immediately following the first time frame (e.g., frame #4) (e.g., see col. 5, lines 39-41 regarding “When UM[] receives the grant, it immediately transmits its two fragment 305 in the large data channel 420 of RF TDM frame #5”).

Further, regarding claims 41, 43, 50-52, Buchholz teaches the method discussed above regarding claim 30 may be performed by machine-readable medium have stored thereon data representing sequences of instructions for causing the machine to perform the steps (e.g., see col. 7, lines 8-15 regarding the operations being performed by user and control modules which issue the commands, inherently via machine-readable medium for operating the modules).

Regarding claim 31, Buchholz teaches receiving data from the second radio (e.g., CM 105) in the assigned slot in the second frame (e.g., see FIG. 4 and col. 5, lines 39-41 regarding

UM transmitting “fragment 305 in the large data channel 420 of RF TDM frame #5” and see col. 4, lines 41-44 regarding fragment 305 comprising “data ... of less than 256 bytes”).

Regarding claim 32, Buchholz teaches the assigned channel (e.g., large data channel) is in a first slot for sending the data to the second radio (e.g., CM 105) and in a second slot for receiving data from the second radio, the method further comprising receiving data from the second radio in the second assigned slot in the second frame (e.g., see col. 4, lines 1-5 regarding “During the first half of the RF TDM frame 400, the CM 105 receives data transmitted by the UMs 101-103. In the second half of the RF TDM frame 400, the roles are reversed and the UMs 101-103 receive data transmitted by the CM 105”).

Regarding claim 35, Buchholz teaches sending a further request message to open a further communications stream based on the registration (e.g., see col. 4, lines 54-65 regarding “UM(B) 102 also requests access to the small data channel”); receiving a further channel assignment message from the second radio (e.g., CM 105) in response to the further request message (e.g., see col. 4, lines 56-59 regarding “A small data channel grant is sent back from the CM105 to UM(B) 102 in the grant timeslot 410 of RF TDM frame #3”), the further channel assignment message including an identification of a further assigned communications channel (e.g., small data channel) for the further communications stream (e.g., see col. 4, lines 56-59 regarding identifying timeslot 410 for the small data channel grant); and sending data to the second radio in response to the channel assignment message (e.g., see col. 4, lines 59-61 regarding “UM(B) 102 accesses the small data channel 415 in the ensuing RFM TDM frame time, #4, upon receiving the grant in RF TDM frame #3”).

Regarding claims 42, 45 and 56, Buchholz teaches the request message comprises an identification of the registration information (e.g., see col. 4, lines 29-41 regarding sending "information such as the address of the source UM").

Regarding claim 57, Buchholz teaches the assigned communications channel is shared with other radios (e.g., each of UM 101-103, see FIGS. 1 and 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz in view of U.S. Patent No. 6,738,638 to Mousley.

Regarding claim 36, Buchholz teaches the method discussed above regarding claim 35, however, may not specifically disclose closing the first communications stream before sending the further request message. Mousley, like Buchholz, teaches a radio communication system comprising requests for communications followed by responses (e.g., see abstract). Specifically, Mousley teaches closing the first communications stream before sending the further request message (e.g., see col. 4, line 66 – col. 5, line 4 regarding "the system could be controlled so that an access acknowledgement 206 cannot be transmitted at the same time as a first contention resolution acknowledgement 210, thereby ensuring that the first and second contention resolution phases cannot occur simultaneously"). Additionally, the particular teachings of Mousley

Art Unit: 2616

provide reduced delay and increased capacity due to reducing the probability of data loss caused by collisions (e.g., see Mousley at col. 1, line 3 – col. 2, line 46). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Mousley to the radio communication system method of Buchholz in order to provide reduced delay and increased capacity due to reducing the probability of data loss caused by collisions (e.g., see Mousley at col. 1, line 3 – col. 2, line 46).

Regarding claim 38, Mousley teaches a request message includes information about a power level with which the request message is transmitted (e.g., see col. 3, lines 46-52 regarding transmitting with a particular power level) and wherein a channel assignment message includes information about a power level with which the first radio should transmit on the assigned communications channel (e.g., see col. 4, lines 17-26 regarding “power control information to instruct the MS 110 to adjust its transmission power as necessary”). Additionally, as discussed above, the particular teachings of Mousley provide reduced delay and increased capacity due to reducing the probability of data loss caused by collisions (e.g., see Mousley at col. 1, line 3 – col. 2, line 46). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Mousley to the radio communication system method of Buchholz in order to provide reduced delay and increased capacity due to reducing the probability of data loss caused by collisions (e.g., see Mousley at col. 1, line 3 – col. 2, line 46).

6. Claims 33, 34, 37, 39, 40, 46-49, 54, 55 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz in view of U.S. Patent No. 6,804,212 to Vallstrom et al.

Regarding claims 33 and 48, Buchholz teaches sending the request message comprises sending a request message to the second radio (e.g., CM 105) based on the registration in a slot of a time division multiple access frame to open the communications stream (e.g., see FIG. 8 and col. 6, lines 22-58 regarding TDMA frame communications, wherein the request message from UM to CM 105 occurring in the first timeslot is inherently an uplink). However, Buchholz may not specifically disclose the slot is an uplink random access slot. Vallstrom, like Buchholz, teaches a radio communication system for establishing a connection, and specifically, Vallstrom teaches a slot comprises an uplink random access channel (RACH) slot (e.g., see col. 4, line 56 – col. 6, line 16 regarding RACH). Additionally, the teachings of Vallstrom provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Vallstrom to the radio communication method of Buchholz in order to provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32).

Regarding claim 34, Buchholz teaches the slot is assigned during registering (e.g., see col. 5, lines 15-57, particularly lines 20-27 regarding “UM[] initiates a transfer of its four fragments by sending an access request [, and] CM 105 assigns the four fragments into large data channels”).

Regarding claims 37, 46, 47, 54, 55 and 58, Buchholz teaches the method discussed above regarding claims 30 and 45, however, may not specifically disclose an extended training sequence or other information regarding capabilities and communications environment of the

first radio. Vallstrom, like Buchholz, teaches a radio communication system for establishing a connection, and specifically, Vallstrom teaches a request message comprises an extended timing sequence (e.g., timing advance value corresponding to distance) to assist the base station in measuring special parameters regarding capabilities and communications environment of the first radio (e.g., see col. 5, line 19 – col. 6, line 44 regarding timing advance value corresponding to distance and used by base station to determine the parameter's correspondence with distance to the mobile station). Additionally, the teachings of Vallstrom provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Vallstrom to the radio communication method of Buchholz in order to provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32).

Further, regarding claim 55, Vallstrom also teaches a training sequence in combination with an extended training sequence (e.g., timing advance parameter TA from 0-63 as well as a parameter of greater distances beyond the 64 normal-range timing, see col. 5, lines 29-66), and while Buchholz in view of Vallstrom may not specifically disclose the extended training sequence is at least twice as long as a training sequence, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148

F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize an extended training sequence at least twice as long as a training sequence since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

Regarding claim 39, Buchholz teaches the method discussed above regarding claim 30, however, may not specifically disclose including a timing correction. Vallstrom, like Buchholz, teaches a radio communication system for establishing a connection, and specifically, Vallstrom teaches a channel assignment message includes a timing correction for the first radio to apply when sending data over the assigned communications channel (e.g., see col. 5, lines 38-45 regarding “a timing advance correction value”). Additionally, as discussed above, the teachings of Vallstrom provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Vallstrom to the radio communication method of Buchholz in order to provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32).

Regarding claims 40 and 49, Vallstrom teaches receiving a page from a second radio and wherein sending a request message comprises sending a request message in response to the

received page (e.g., see col. 4, lines 56-65 regarding “base station sends a paging message to the mobile station” and “The mobile station then ... transmits CHANNEL REQUEST messages”). Additionally, as discussed above, the teachings of Vallstrom provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the radio communication system teachings of Vallstrom to the radio communication method of Buchholz in order to provide increased data transmission capacity for traffic channels (e.g., see Vallstrom at col. 1, line 5 – col. 4, line 20, and in particular col. 3, lines 26-32).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Justin M Philpott